

TOWARD A SYNTHESIS OF SCIENCE AND SPIRITUALITY

Science developed by separating itself from religion. It needed to distinguish itself from the medieval-scholastic view of the world about four hundred years ago to make any genuine progress. As Willis Harman, former director of The Institute of Noetic Sciences, points out, “This division of realms [between science and religion] gave the scientists a relatively free hand in physical discovery. It provided a respected barrier behind which they might conveniently pursue their research, untrammelled by the constraints of personal

conscience and/or political and religious censorship” (Harman, 1990).

It would have been confusing for scientists, attempting to deduce natural laws based on observation of natural phenomena, to have to contend with *teleological* or *purposive processes*, which had informed the Aristotelian worldview.

Nor was it easy for science to address *consciousness*, active minimally in organisms, and, potentially, at other levels of the objective world. No wonder science has had such a strong need since the Renaissance to divest itself completely from any association with religion and theological explanations of nature.

Science and religion have had a long history of conflict over the past several hundred years.

They are two areas of human endeavor and experience that are fundamentally different in purpose, yet they have a *shared interest in understanding the world*. Both are seeking to plumb the nature of reality even if their methods and results in this endeavor are quite different.

Both seek to fathom and uncover the “truth,” albeit different kinds of truth. Science seeks *objective* truth about the laws and principles that govern natural phenomena. Religion seeks *existential* truth about the ultimate meaning of human life in the face of inevitable death. In theology it also seeks metaphysical

understanding about presumed realities that lie beyond the physical universe. *Giving equal credibility and legitimacy to these rather different types of "truth" is necessary in order to resolve the long-standing conflict between science and religion.*

We need a view of reality and the universe large enough to embrace both kinds of truth.

To be sure, there are some very significant differences between science and religion. The fundamental goals of science and religion differ. Science basically tries to *account for natural phenomena* in terms of mechanistic (including statistical) laws and principles. Religion is primarily concerned with providing *a way of life* that offers an overall worldview, ethical norms

for human behavior, and institutions that serve a worshiping community. The generalizations of science are primarily descriptive; those of religion are both descriptive and *prescriptive*. The kinds of questions asked by science and religion also differ. Science asks *how* questions: how does something work or how can it be explained in terms of natural causes. Religion, on the other hand, often asks *why* questions. In explaining why something happened, it may invoke explanations in terms of cosmic or divine purposes—or symbolic meanings. Finally, the *basis of knowledge and understanding* in the two domains differs. Scientific knowledge is based on replicable sensory experiences of independent observers. In religion, the basis of

knowledge about reality is often intuitive, revelatory, and based on personal experiences that are not always easily replicated.

In short, science and religion differ in their fundamental *intent* or purpose, the *kinds of questions* they ask about events, and the *types of experience* on which their respective views of the world rest. Yet in spite of these significant differences, there is one respect in which they are similar.

What science and religion share is *a mutual interest in arriving at an understanding of the world and of human life, and at “getting at the truth” about these things.* Historically, the different types of

accounts they tend to give about the world and life have clashed.

Scientists claim that while religion is a matter of personal preference, there is no objective evidence for any religious claims about God or what lies in or beyond the world as we can see it.

From a strictly scientific perspective, religious beliefs may serve important psychological or sociological functions, but they have no inherent validity because there is no scientific evidence for them. Thus religion oversteps its bounds in claiming that religious beliefs are true statements about what actually exists in (or beyond) the world.

Religious authorities, on the other hand, claim that science is a valid enterprise within its own sphere but that it cannot answer fundamental questions about life and its ultimate meaning or purpose. Thus it has no business deciding on the legitimacy of theological or metaphysical beliefs. Scientists cannot *disprove* the existence of God—or religious beliefs about redemption and grace, or karma and reincarnation, for example. From the standpoint of religion, scientists have no basis for claiming that these beliefs are invalid or without substance. Science oversteps its bounds (according to religion) when it makes metaphysical claims about what exists or does not exist (for example, the materialist thesis that nothing but physical phenomena can exist, or

the empiricist assumption that nothing that cannot be observed through the senses can exist).

From this standpoint, just because we can't systematically observe and measure angels or Divine Providence doesn't "prove" that such things don't exist.

How can science and religion be brought closer together? One way is to look at the *similarities*— rather than the differences— between their respective ways of attempting to understand reality. At least two points of similarity come to mind.

Both science and religion rely on "paradigms" to interpret reality.

A “paradigm,” according to Thomas Kuhn, author of the classic book *The Structure of Scientific Revolutions* (Kuhn, 1970) is a cluster of conceptual, metaphysical, and methodological assumptions embedded in a particular tradition of scientific work. Paradigms blur the sharp distinction between theory and observation that science once claimed. With a paradigm, new data are accommodated and understood within a particular frame of reference. An established paradigm tends to be resistant to falsification, since discrepancies between the paradigm and new data are—for a while—set aside.

Anomalous data that do not fit the paradigm are reconciled by adding ad hoc hypotheses. For example, experiments by Alain Aspect have

demonstrated nonlocal, “simultaneous influence” between separate particles that cannot be explained by conventional physics. This anomaly has not been accommodated to mainstream theory in physics, and, in spite of its momentous implications, has been relatively neglected by adherents of the prevailing paradigm.

Religious paradigms (metaphysical assumptions of different religious traditions) are probably even less subject to falsification—and more inclined to explain anomalous phenomena by ad hoc hypotheses—than scientific paradigms. For example, all kinds of ad hoc hypotheses have been proposed by Christian theology

to explain the existence of evil in the world, which is incompatible with the existence of a loving and omnipotent God. The point, though, is that the difference between scientific and religious paradigms is one of *degree*—it's not an absolute, irreconcilable difference.

In both science and religion, the phenomena of interest are shaped by the subjective characteristics of the "observer."

Observed events cannot be said to be totally independent of the theories and assumptions of the observer. Thus interpretation enters into observation for both science and religion, though clearly more so for religion (the multiple

interpretations of the Bible or other sacred texts, to give only one example, would attest to this).

In quantum physics, the influence of the process of observation on the system observed is crucial.

In relativity theory, the basic meaning of the mass, velocity, and length of a moving object depend on the frame of reference of the observer.

In experimental biology and psychology, the outcome of an experiment is often skewed in the direction of the preferences or expectations of the experimenter, a phenomenon called

“experimenter bias.” This is the basis for doing blind or double-blind experiments in much research on human subjects.

In religion, the concepts of the believer shape what is seen to an even greater degree. Near-death experiencers who are Christian may see Jesus or angels, while those who are Hindu may see Hindu deities such as Krishna or devas. The concepts of each religion tend to prefigure their adherents' perceptions of numinous phenomena. However, again, the difference between the "observer" in science and in religion is one of degree, not kind. In both cases, the phenomena being "observed" are shaped by the categories and perceptual biases of the observer.

To conclude, though religion and science differ in their primary functions and roles, they share a common interest in uncovering the truth about

reality. Their approaches to understanding the world differ. Science relies on direct, replicable sense-experience, while “religious knowledge” is based on intuition, revelation, and visionary experience. Science attempts to explain the world in terms of mechanistic causes, while religion is more concerned with symbolic meanings and purposes. However, their respective approaches to the world converge in three respects: both rely on creative insights in developing their views of the world; both rely on paradigms that are relatively resistant to falsification; and “observation” in both domains is shaped by the assumptions of the observer.

Integrating Science and Religion

What would it take for scientific and religious conceptions of reality to be brought closer together—even “married”? The consensus view of “reality” shared by most of humanity would certainly need to be enlarged beyond the materialistic and mechanistic view that prevails in mainstream science at present. *Materialistic* implies the assumption that only material phenomena have real existence and that anything else (such as mind and consciousness) can be reduced to them. *Mechanistic* implies the assumption that everything in the universe can be accounted for in terms of mechanistic causes and that anything

else (such as evolution and human intentions) can ultimately be explained in terms of such causes.

What would an enlarged view of reality that could embrace both science and religion look like? It would likely have *at least* the following three characteristics:

- 1) A way of combining causal explanations with teleological explanations (explanations in terms of purposes) into a single view of the world That is, nature would be understood to be intrinsically purposive or intentional on all levels, and purposes would not be “reduced” to causal mechanisms. Yet the very same nature could also be understood causally. This would

certainly be a radical change from the prevailing view, but it's not a new idea. Aristotle, Plotinus, and Aquinas have proposed this type of view in the past, while Alfred North Whitehead and Rupert Sheldrake have proposed models of the world along these lines in the twentieth century.

2) A way of including consciousness as a part of "nature" or the universe without reducing consciousness to material processes

Consciousness would be a phenomenon in its own right that could both influence and be influenced by material events. In the essay "Toward a Larger Universe," the thesis was developed that consciousness (in its outward aspect as an ordering intelligence, not as experienced) and

matter can be understood to be different “strata” or levels within a common “spectrum” of *energy phenomena*. Consciousness and matter are different forms (some would say vibrational frequencies) of some ultimate energy, one material and observable, the other subtle and invisible to ordinary sense perception.

Interactions between consciousness and matter involve specific types of energy exchange. The details of this interaction will someday be understood scientifically and constitute nothing less than a solution to the age-old “mind-body” problem. The idea that consciousness and matter are different levels of a common spectrum is not new. It’s been around for a long time, from ancient Hinduism through modern

theosophy. It's sometimes referred to as the "Great Chain of Being" and is embraced by the contemporary philosopher Ken Wilber.

3) A way of relating ego consciousness (the consciousness of everyday experience) to "higher" levels of consciousness, such as the "collective unconscious" as described by Carl Jung, and the "supraconscious" as described by transpersonal psychologists such as Ken Wilber (1998) and Stan Grof (1993).

This would be a major expansion of the prevailing paradigm of consciousness within psychology, which tends to marginalize Jung and transpersonal psychology. This larger view

of consciousness is described in the essay
“Toward a Larger Universe.”

A Broader View of Valid Knowledge

Accompanying these expansions of the consensus view of the cosmos, there would need to be a broader view of what constitutes “valid knowledge.” As discussed elsewhere in the essays of this website, more *participatory/intuitive types of knowing* (besides those based solely on sense perception), such as empathy, insight, clairvoyance, telepathy, revelation, and visionary experiences (as well as practical existential wisdom), would come to be regarded as *valid bases for knowledge*. One hundred years ago, in his book *The Varieties of Religious*

Experience, William James referred to this idea as *radical empiricism*: the notion that nothing within the full domain of human experience should be excluded as a potential basis for knowing reality (James, 1902).

If radical empiricism is adopted as the basis for the *consensus* view of reality, then notions of what constitutes a “satisfactory level of consensus” need to be modified as well. In short, *standards of consensus need to be relaxed* somewhat from the strictness that is required by science.

The level of inter-observer consensus required for scientific knowledge is quite high, and this is appropriate for sensory-based knowledge of natural phenomena such as subatomic particles,

cells, tectonic plates, or stars and galaxies.

Intuitive and revelatory experiences do not as easily lend themselves to such high levels of observer consensus, and they are subject to individual and cultural interpretations. This needs to be taken into account in evaluating the validity of cross-cultural knowledge based on such forms of experience.

Not as many people worldwide have experiences of synchronicities or spirit guides as they do of thunderstorms or solar eclipses, and yet the experience of synchronicities and spirit guides are common enough to achieve a *relative* level of consensus. If radical empiricism becomes the basis for a much broader view of

the cosmos than is allowed for by present-day science, then we also need to accept that the *more subtle, nonphysical aspects of such a cosmos are less amenable to the high levels of consensus possible with sensory-based knowledge of physical phenomena.*

Perhaps this is the most radical departure of the proposed worldview from the current, prevailing scientific view of the world. Science has dictated that we can only reliably know that which lends itself to very high and replicable consensus among independent “observers.” The broader view intimated here includes a much wider range of “legitimate experience.” It does not exclude intuitive, paranormal, or revelatory

experience just because it is more subject to interpretation and less amenable to consensus. Instead, it maintains that *there may be a wide variety of phenomena that we should not exclude from our view of reality just because they are more difficult to experience and less easily agreed upon.*

Conclusion

To conclude, it would seem that the distinction between the scientific and religious approaches to understanding the cosmos will ultimately turn out to be an artificial one. Why? *Because there is only one world or cosmos that should ultimately admit of only one explanation and understanding.* There cannot be two *entirely separate* realms—one explained in terms of

physical, causal laws and the other in terms of “spiritual forces,” “purposes,” “consciousness,” or “conscious intelligence.” Although science and religion offer two very different kinds of explanation of the universe, these interpretations ultimately apply to the same cosmos.

Apparently the cosmos is so wonderfully rich and complex that it requires both types of understanding. The outer, spatial domain has its explanations in terms of natural, causal laws, and the inner, conscious domain has its explanations in terms of psychological, sociological, archetypal, and spiritual concepts, principles, and processes. However, both the

outer and inner domains somehow map onto the same underlying “reality.”

If there is only *one reality* that both science and religion are seeking to understand, it seems evident that the clash between different respective views of such a reality *is in our minds* — not in the inherent nature of things. It seems inevitable that eventually, possibly even within the next hundred years, humanity will arrive at (or actually rediscover) a more unified view of the world where scientific and religious accounts complement rather than clash with each other.

References

Harman, Willis. *Global Mind Change*. New York: Warner Books, 1990.

Grof, Stan. *The Holotropic Mind*. San Francisco, CA: HarperOne, 1993.

James, William. *The Varieties of Religious Experience*. Repr., New York: Touchstone, 1997.

Kuhn, Thomas. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1970.

Wilber, Ken. *A Brief History of Everything*. Boston: Shambhala, 1996.